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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,340	09/16/2003	Junji Kobayashi	H64-154706M/MNN	9314

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EXAMINER

NOTE, JANIS L

ART UNIT	PAPER NUMBER
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1756

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/662,340	Applicant(s) KOBAYASHI ET AL.	
	Examiner Janis L. Dote	Art Unit 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-14,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5 is/are rejected.
- 7) ☒ Claim(s) 1,4,6-14,20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/21/06</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The examiner acknowledges the amendments to claims 1, 4-6, and 8-14, the cancellation of claim 3, and the addition of claim 21 set forth in the amendment filed on Oct. 30, 2006. Claims 1, 4-14, 20, and 21 are pending.

2. The rejections of claims 1 and 3-14 under 35 U.S.C. 112, second paragraph, set forth in the office action mailed on Jul. 28, 2006, paragraph 6, have been withdrawn in response to the amendments to claims 1, 5, and 11 filed on Oct. 30, 2006.

The rejections of claims 8-10 and 13 under 35 U.S.C. 112, first paragraph, set forth in the office action mailed on Jul. 28, 2006, paragraph 8, have been withdrawn in response to the amendments to claims 8-10 and 13 filed on Oct. 30, 2006.

The objection to claim 20 set forth in the office action mailed on Jul. 28, 2006, has been withdrawn in response to claim 20 rewritten in the list of claims filed on Oct. 30, 2006.

The rejections of claims 1, 6-8, 12, and 14 under 35 U.S.C. 102(b)/103(a) over US 5,605,778 (Onuma), as evidenced by Schaffert, Electrophotography, page 604, Fig. 248, and of claim 4 under 35 U.S.C. 102(b)/103(a) over Onuma, set forth in the office action mailed on Jul. 28, 2006, paragraphs 12 and 13, respectively, have been withdrawn in response to the amendment to claim 1 and the amendments to claims 8, 12, and 14 filed on

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Oct. 30, 2006. The amendment to claim 1 adds the limitation that "at least one of said wax components comprises a crystallinity which is greater than 85% and less than 95%." The amendments to claims 4, 8, 12, and 14 change the dependency of those claims from claim 1 to claim 20, which also requires that at least one of the wax components "comprises a crystallinity which is greater than 85% to less than 95%." As discussed in paragraph 12, Onuma teaches a toner comprising a plurality of wax components that satisfy formulas (1)-(3) recited in instant claims 1 and 20, where at least one of the wax components has a melting point in the range of 50 to 120°C. However, Onuma does not teach or suggest that one of the wax components has a crystallinity of greater than 85% and less than 93% as recited in instant claims 1 and 20. Nor is there sufficient evidence in the present record for a person having ordinary skill in the art to reasonably presume that one of the Onuma waxes in the plurality of wax components has the required crystallinity recited in instant claims 1 and 20.

The rejection of claim 5 under 35 U.S.C. 102(b) over US 6,447,968 B1 (Ohno'968), set forth in the office action mailed on Jul. 28, 2006, paragraph 15, has been withdrawn in response to the amendment to claim 5 filed on Oct. 30, 2006.

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Amended claim 5 positively recites that the particular toner recited in the claim is present in the apparatus.

3. The amendment filed on Dec. 9, 2004, is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The amended paragraph beginning at page 29, line 12, of the specification, states that the toner comprises 84 wt% of the styrene-acryl copolymer resin.

The originally filed specification at page 29, line 12, discloses that the toner components comprise "85 wt%" of the styrene-acryl copolymer resin, 1 wt% of a charge control agent, 10 wt% of a carbon black, 4.5 wt% of a polyethylene wax, and 0.75 wt% of a paraffin wax.

There is no evidence on the present record showing that the amount of the styrene-acryl copolymer is 84 wt% as stated in the amended paragraph.

Applicants are required to cancel the new matter in the reply to this Office Action.

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Applicants' arguments filed on Oct. 30, 2006, have been fully considered but they are not persuasive.

Applicants assert that the amendment changing the fixing resin amount from "85 wt%" to -- 84 wt% -- merely corrected an apparent typographic error. Applicants further assert "it would have been apparent to one of ordinary skill in the art that Applicants merely amended the specification to correct a typographic error and did not new matter to the Specification" (emphasis added in the original).

Applicants' comments are not persuasive. As discussed in the objection above, the toner comprises five toner components at particular amounts. Applicants have not pointed to anything in the originally filed specification that a person having ordinary skill in the art would have recognized that the typographic error was in the fixing resin amount of "85 wt%," and not in the amounts of one or more of the other four remaining toner components. Accordingly, the objection stands.

4. In view of the disclosure in the instant specification and applicants' comments, the examiner has interpreted the phrase "sufficient fixing performance while maintaining heat resistance and durability" as referring to properties of the toner. See

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the instant specification, page 9, line 22, page 10, lines 1-3 and 18-21. Also see applicants' comments in the response filed on Oct. 30, 2006, page 14, lines 18-21.

If applicants do not agree, they should clearly state so and indicate where there is antecedent basis in the originally filed specification for their interpretation.

5. Claims 1, 5, 20, and 21 are objected to because of the following informalities:

Formula (1) should be rewritten such that the parameters "k" and "N=1" are immediately adjacent above and below, respectively, the addition symbol " Σ ".

In the instant claims the parameters are too far from the addition symbol " Σ " and do not appear to be associated with the symbol.

Appropriate correction is required.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claim 5 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious

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over US 5,605,778 (Onuma), as evidenced by Schaffert, Electrophotography, page 604, Fig. 248.

Onuma discloses a toner comprising 100 parts by weight of styrene-n-butyl acrylate binder resin **1** and 4 parts by weight of a wax mixture comprising a plurality of waxes. The wax mixture comprises paraffin wax **J** and polypropylene wax **K**, in a weight ratio of 1:1. Col. 18, lines 50-58; col. 18, line 62, to col. 19, line 8; col. 19, lines 25-44; example 9 at col. 21, lines 55-58; and Table 2, example 9. Onuma further discloses an image forming apparatus - a commercially available electrophotographic copying machine NP-4835 manufactured by Canon K.K., which comprises an OPC (organic photoconductor) photosensitive drum, i.e., an electrostatic charge holding member, and the toner in example 9. Col. 19, line 62, to col. 20, line 12. Although Onuma does not explicitly disclose that the apparatus comprises a developing unit, it is well-known in the electrophotographic arts that commercially available electrophotographic copying machines comprise a developing unit. See Schaffert, Electrophotography, page 604, Fig. 248, which shows the schematic diagram of a XEROX 914 copier. Thus, the Onuma image forming apparatus comprises a developing device unit as recited in instant claim 5.

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Paraffin wax **J** has a maximum heat absorption peak, i.e., melting point, of 62°C, which is within the range of 50 to 120°C recited in instant claim 1. See Table 1, wax **J**. Paraffin wax **J** and polypropylene wax **K** meet the wax compositional limitations recited in instant claim 8. Paraffin wax **J** exhibits on onset temperature of heat absorption (T_n) in a DSC curve at 54°C. Polypropylene wax **K** exhibits on onset temperature of heat absorption in a DSC curve at 133°C. See Table 1 at col. 23, waxes **J** and **K**. The Onuma toner in example 9 satisfies formulas (1) to (3) recited in instant claims 1 and 5. "T" in formula (1) is 93.5°C (i.e., $[54^\circ\text{C} \times 50 \text{ wt}\% + 133^\circ\text{C} \times 50 \text{ wt}\%]/100 \text{ wt}\%$). The "T" value of 93.5°C is greater than 56, so the inequality in formula (2) is satisfied.

Onuma does not explicitly disclose that its particular combination of waxes comprise "an appropriate amount of a low molecular weight wax component in said wax to maintain sufficient fixing performance while maintaining heat resistance and durability" [of the toner] as recited in instant claim 5.

However, Onuma shows that the toner comprising its particular combination of waxes provides toner images that have excellent low-temperature fixability and anti-offset characteristic, and a wide fixable temperature range. Col. 2, lines 14-17, and Table 3 at col. 23, example 9. Table 3 reports

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that the toner in example 9 provided toner images that were capable of being fixed at a temperature of 145°C and that no offset was observed when the toner images were fixed at temperatures ranging from 140 to 230°C. Thus, it appears that the Onuma toner has "sufficient fixability" as recited in instant claim 5.

Onuma further teaches that its toner has "excellent anti-blocking characteristics and [is] free from lowering of developing performance during continuous image formation operation." Col. 2, lines 18-22. Table 3 reports that when the toner in example 9 was left standing for three days at 50°C, "[a]gglomerate is observed but collapses quickly." The toner anti-blocking characteristics are labeled by the symbol "o", i.e., "good" anti-blocking characteristics. Table 3 further reports that after 5,000 copies, no melt-sticking of the toner onto the "OPC" photosensitive drum is observed, i.e., the toner provides images with no occurrence of image defects such as black spots. Col. 20, lines 40-46. Because the Onuma toner has good anti-blocking characteristics at 50°C and provides continuous provide images without defects, it appears that the Onuma toner is resistant to heat and also has durability.

Accordingly, because the Onuma toner has "sufficient fixing performance" and appears to be resistant to heat and has

durability, it is reasonable to presume that the Onuma wax composition has "an appropriate amount of a low molecular weight wax component" as recited instant claim 5. The burden is on applicants to show otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

Applicants' arguments filed on Oct. 30, 2006, as applicable to the rejection over Onuma above have been fully considered but they are not persuasive.

Applicants assert that Onuma does not teach that its wax combination comprises an "appropriate amount of a low molecular weight wax component in said wax to maintain sufficient fixing performance while maintaining heat resistance and durability" as recited in instant claim 5.

Applicants' assertion is not persuasive. For the reasons discussed in the rejection above, a prima facie case has been established that the Onuma wax combination comprises an "appropriate amount of a low molecular weight wax component" as recited in instant claim 5. Since the PTO cannot conduct tests, the burden is properly shifted to applicants to come forward with objective evidence to distinguish the claimed subject matter with the reference material. Applicants have not provided any objective evidence to show that the Onuma wax combination does not comprise an "appropriate amount of a low

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molecular weight wax component" as recited in instant claim 5.

Thus, for the reasons discussed in the rejection, it is reasonable to presume that the Onuma wax combination comprises an appropriate amount of a low molecular weight wax as recited in instant claim 5. Applicants have not come forward with any objective evidence to show otherwise. Accordingly, the rejection of claim 5 over Onuma stands.

8. Claims 1, 4, 6-14, 20, and 21 would be allowable if rewritten or amended to overcome the objection set forth in paragraph 5, supra.

The claims are allowable over the prior art of record, in particular over Onuma, for the reasons discussed in paragraph 2 above.

9. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened

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statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLD

Jan. 5, 2007

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